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ARRENURI FROM THE ISLAND OF YAP

(Acarina: Arrenuridae)

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Among the Acarina collections in the United States National Museum are specimens of water mites taken on the Island of Yap. These mites, collected by D. G. Frey in February 1946, are interesting in that they represent the most eastward record of Hydracarina in the Caroline Island chain. The two following species of water mites, *Neumania nodosa* (Daday) and *Arrenurus toxopeusi* Viets, have been recorded by Uchida (1935, 1939) from the Palau Islands which lie approximately 300 miles to the west.

The Yap collections contain two species of *Arrenurus*. One of these, *A. laticodulus* Piersig, is a relatively widespread species which has been found as far away as Madagascar. The other, *A. multicornutus* Walter, was formerly known only from New Caledonia. The male of *multicornutus* and the female of *laticodulus* are here described for the first time. However, it is felt that

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allotypes have little value unless they are from the type locality and for this reason none are designated. The author wishes to thank Dr. Edward W. Baker for the opportunity to examine these mites.

ARRENURUS (MEGALURACARUS) LATICODULUS Piersig

(Figs. 1, 2, 7)

A. laticodulus Piersig, 1898. Zool. Anz. 21:571.

Male:—Length 1.39–1.48 mm.; greatest width 1.03–1.15 mm.; greatest height 1.16–1.40 mm.; width of cauda 0.79–0.92 mm. Body proper bulging anterior to eyes; with two small projections on either side of the midline, these with small round clear areas; small projections present over the eyes; with two very large, bluntly-pointed humps immediately back of eyes; sides of body proper nearly parallel, abruptly tapering in region of acetabular plates; cauda short, with pointed postero-lateral projections; cauda without a median indentation; acetabular plates covered with numerous, short setae.

Female:—Length 1.72–2.24 mm.; greatest width 1.44–1.85 mm.; greatest height 1.53–1.75 mm. Anterior end of female similar to that of male; with two large humps back of eyes, these very steep angled in front; a pair of moderately developed, bluntly pointed humps placed postero-laterally and a pair of similar humps at the posterior end; dorsal shield somewhat rounded, with two humps near posterior end; height of body in region of dorsal shield humps almost as high as in region of humps back of eyes; genital opening small; acetabular plates narrow, directed postero-laterally to region of Gland E-2, and then passing laterally.

On the Island of Yap this species has been taken in two distinct habitat types. One of these was a stream near Okau, the other a water-filled shell crater (artificial pond conditions). It would seem probable that the reservoir populations are to be found in streams. As mentioned earlier, this species is widely distributed. *A. laticodulus* was originally described from the Bismarck-Archipelago, but has since been taken in Sumatra, Java, Yap and Madagascar. For a complete list of citations on this species, see Lundblad (1946).

ARRENURUS (MEGALURACARUS) MULTICORNUTUS Walter

(Figs. 3–6)

A. multicornutus Walter, 1915. Nova Caledonia 2:118.

Male:—Length, based on a single specimen, 1.26 mm.; greatest width 0.99 mm.; width of cauda 0.79 mm.; greatest height 1.24 mm. Body proper bulging anterior to eyes; two sharp-pointed projections on lateral part of this bulge and a pair of small rounded humps located medially; anterior portion of body proper with three large, pointed humps of approximately the same height; the median hump between the eyes, the lateral humps back of eyes; dorsal furrow complete, passing onto ventral side just posterior to acetabular plates; cauda wide, narrowest at base; postero-lateral corners of cauda sharp-pointed; median indentation present at posterior end, with a



EXPLANATION OF FIGURES

Fig. 1, *A. laticodulus* Piersig, dorsal view, female. Fig. 2, *A. laticodulus* Piersig, lateral view, male. Fig. 3, *A. multicornutus* Walter, lateral view, male. Fig. 4, *A. multicornutus* Walter, dorsal view, female. Fig. 5, *A. multicornutus* Walter, dorsal view, male. Fig. 6, *A. multicornutus* Walter, palp, female. Fig. 7, *A. laticodulus* Piersig, dorsal view, male.

small rounded projection in the middle of this indentation; a pair of small, bluntly-pointed projections between the median indentation and the postero-lateral edge of the cauda; dorsal shield without humps; body highest near anterior end and tapering rapidly towards posterior end; a pair of small, rounded humps located on ventral side slightly posterior to acetabular plates, these best seen in lateral view.

Female.—Length 1.39–1.77 mm.; greatest width 1.04–1.37 mm.; greatest height 1.17–1.57 mm. Anterior portion of female as in male; a pair of well developed, sharp-pointed humps on the postero-lateral portion of the body; two closely set projections at posterior end, these with a narrow notch between them; dorsal shield much narrower in front than behind; dorsal shield with two large humps near posterior end; body highest at anterior end; acetabular plates extending postero-laterally to region of Gland E-2 and then directed laterally; distal end of second palpal segment with two to four moderately long, ventro-medially located setae.

The habitat of the present species is similar to that of *A. laticodulus*, with specimens having been taken in both the stream and shell crater. Walter (1915) described *A. multicornutus* from a single female collected at New Caledonia. While the New Caledonia specimen is much larger (length 2.1 mm.) than the individuals from Yap, it is felt that in view of the great variation (length 1.39–1.77 mm.) found in females from the present collection, we are probably dealing with extremes of variation within a single species. Walter stated that four setae were present on the inner side of the second palpal segment in the New Caledonia female. There was a variation of two to four of these setae on the second palpal segment in the individuals from Yap.

The deep median cleft in the cauda of the male gives this species a superficial resemblance to certain members of the subgenus *Micruracarus*. Since, however, the dorsal furrow in males of *multicornutus* is complete and passes onto the ventral surface posterior to the acetabular plates, the author feels that this species belongs in the subgenus *Megaluracarus*.

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